

(No Model.)

J. R. RAMBO.
BOLT CUTTER.

No. 598,439.

Patented Feb. 1, 1898.

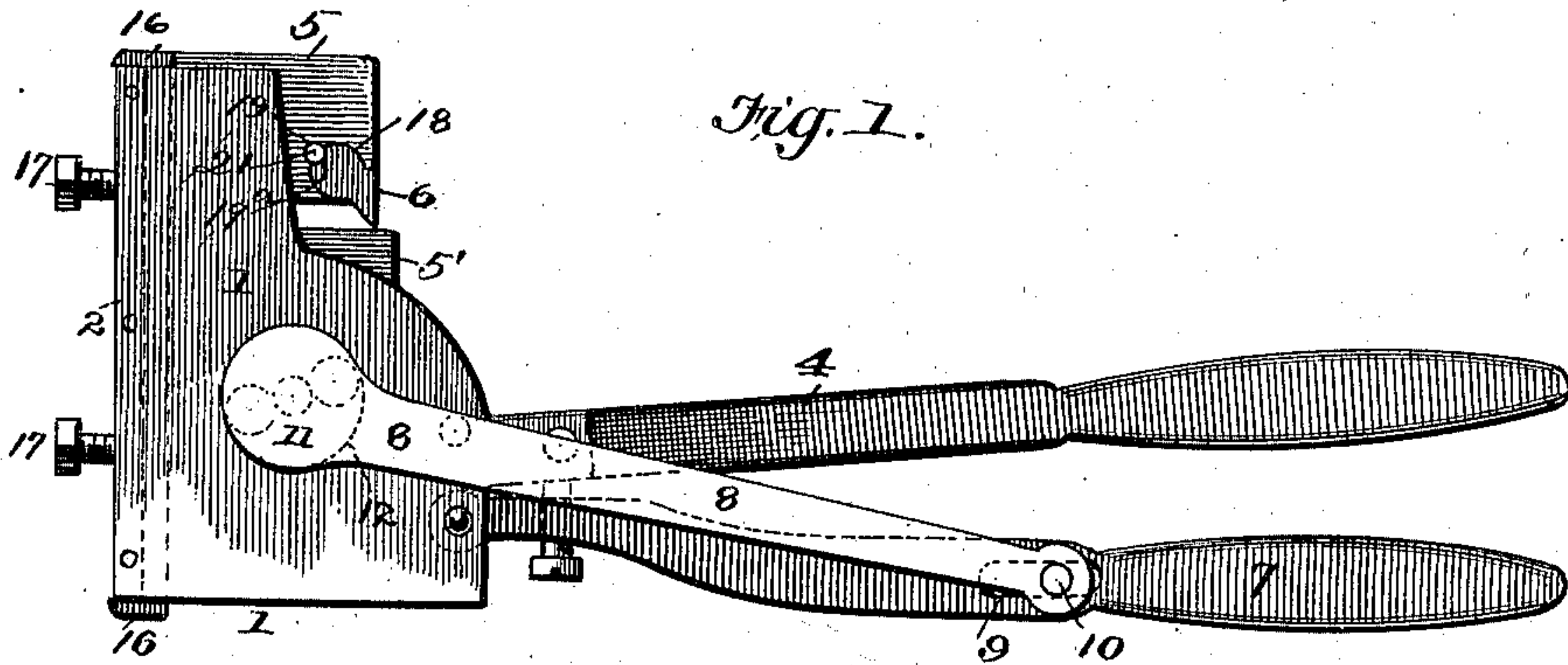


Fig. 1.

Fig. 3.

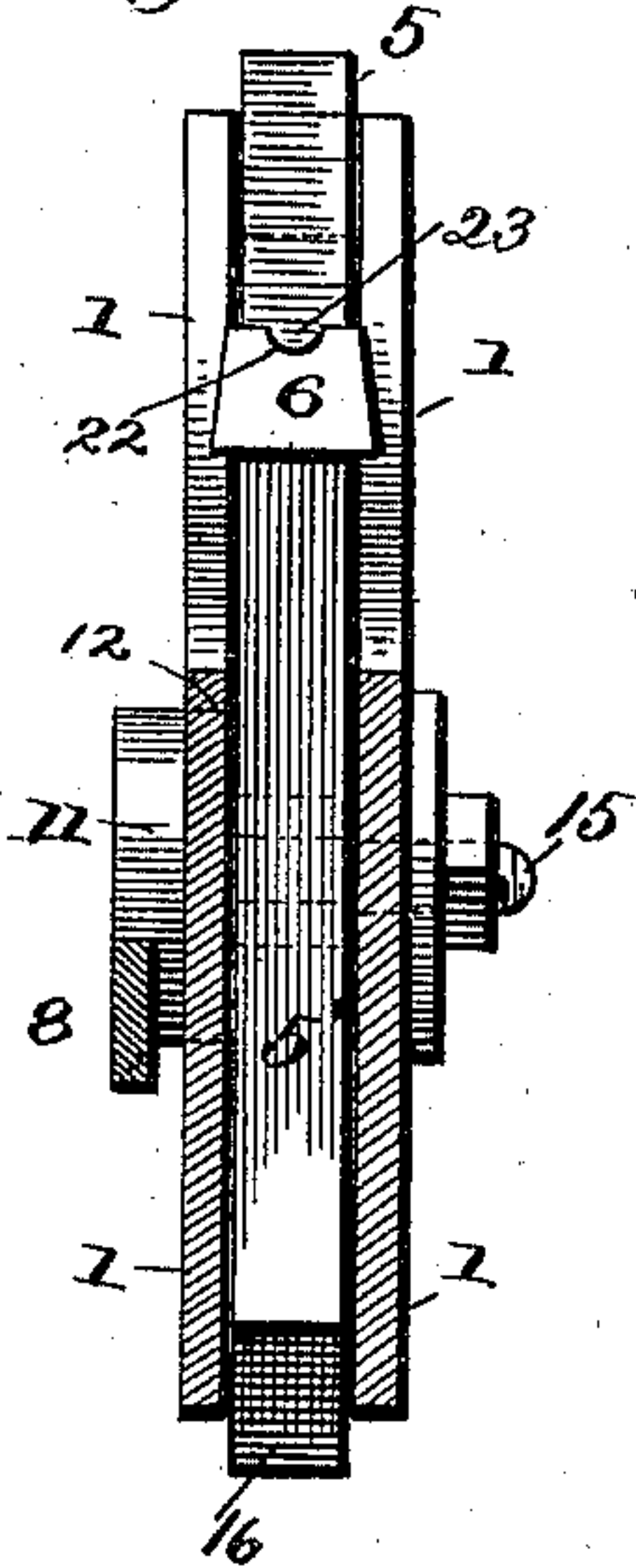


Fig. 2.

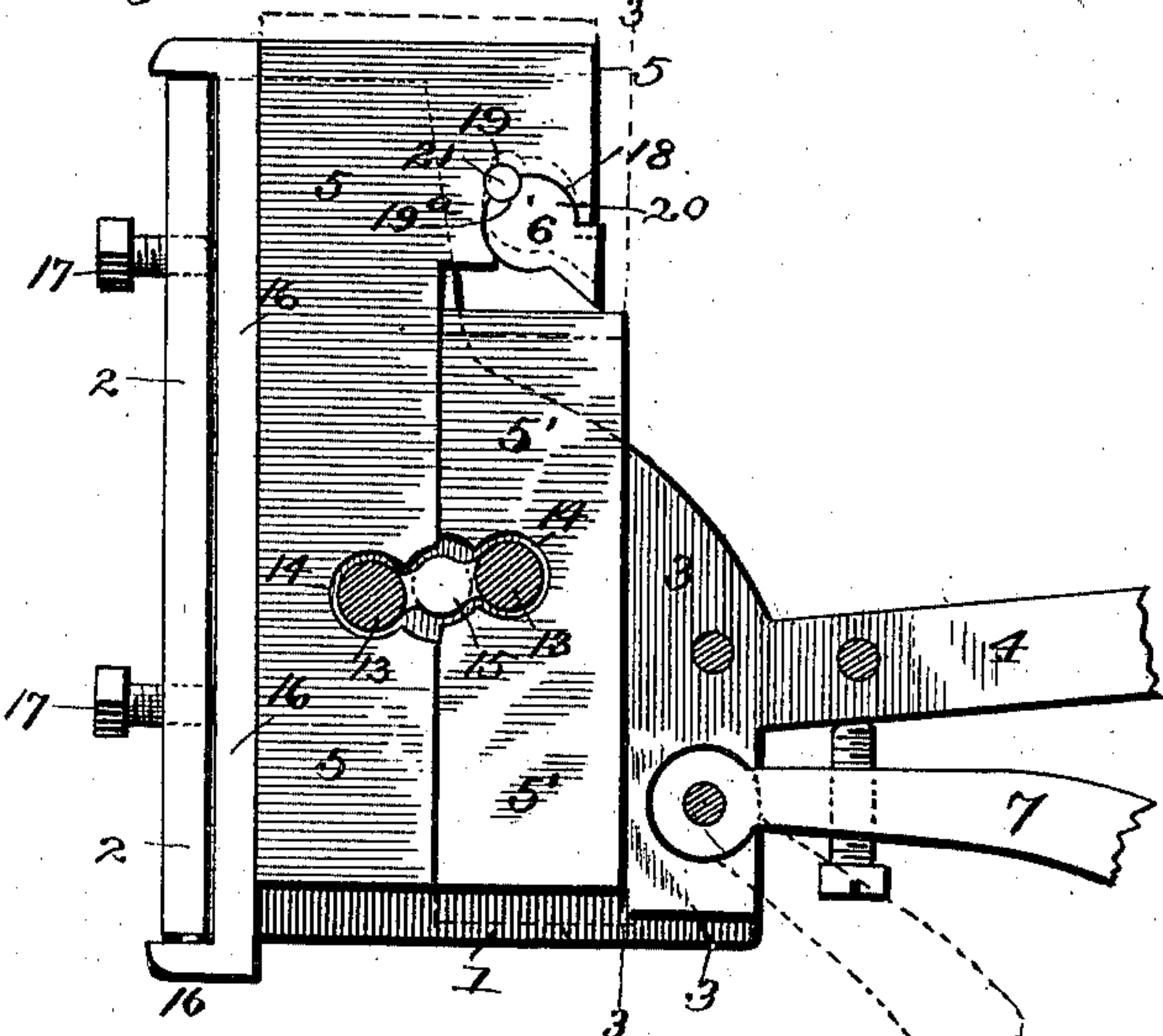


Fig. 4.

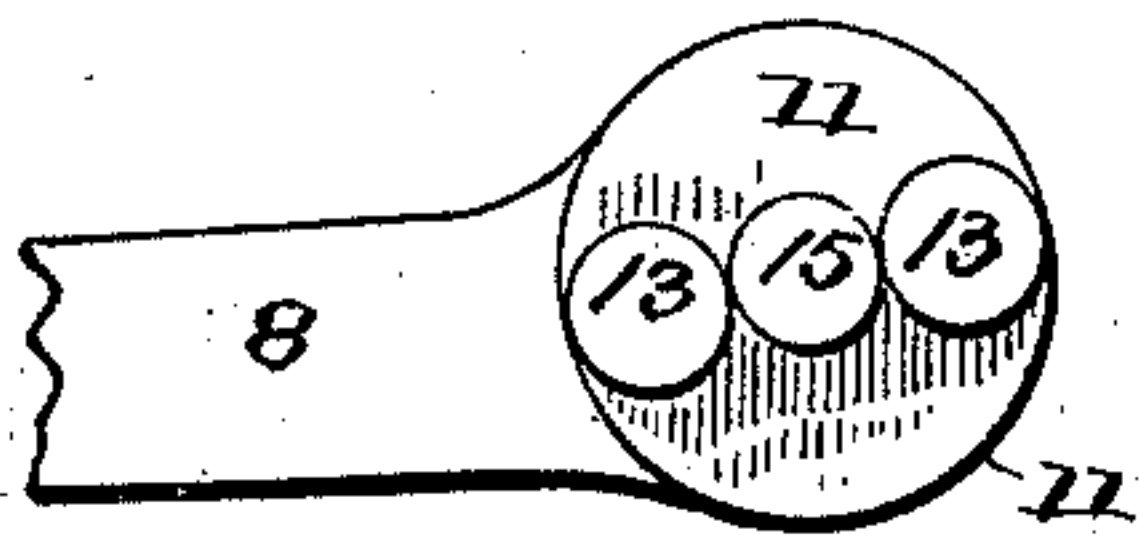


Fig. 5.

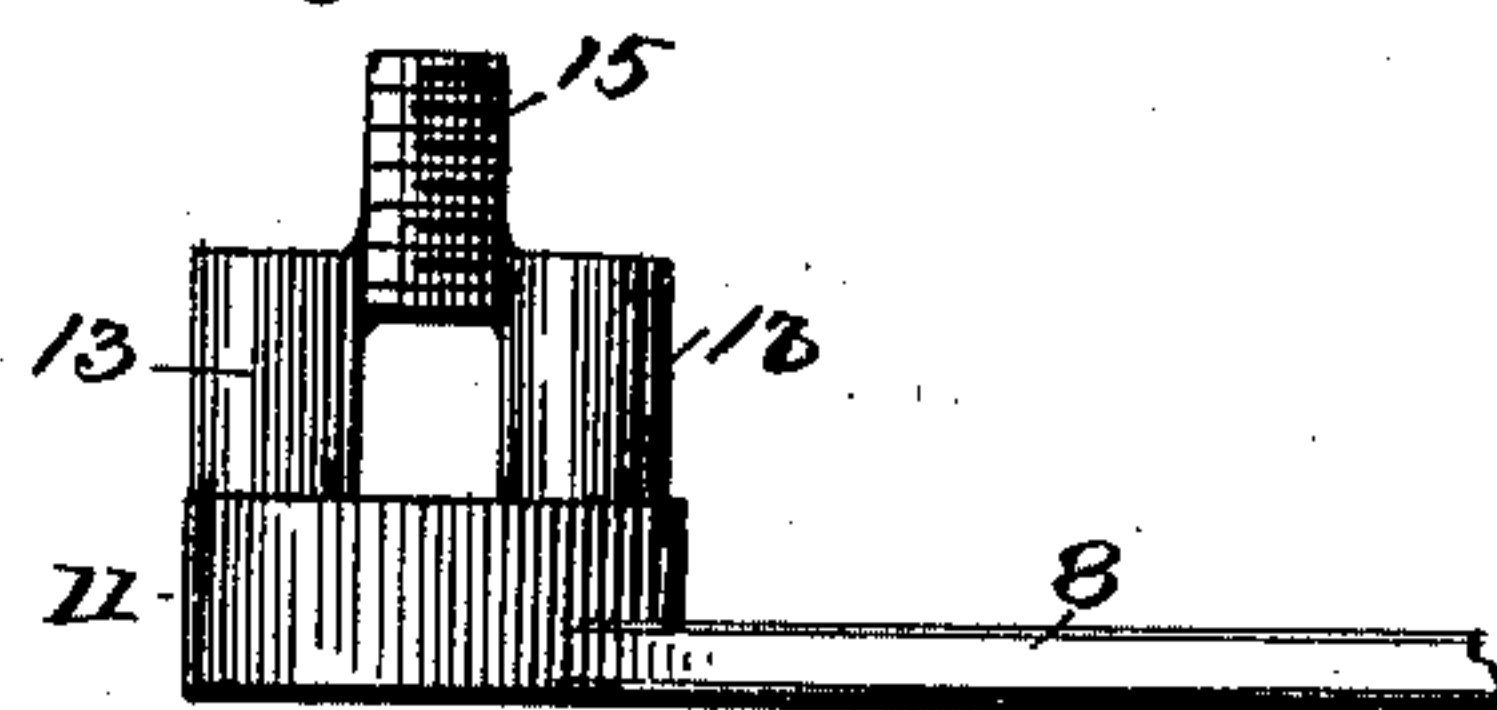
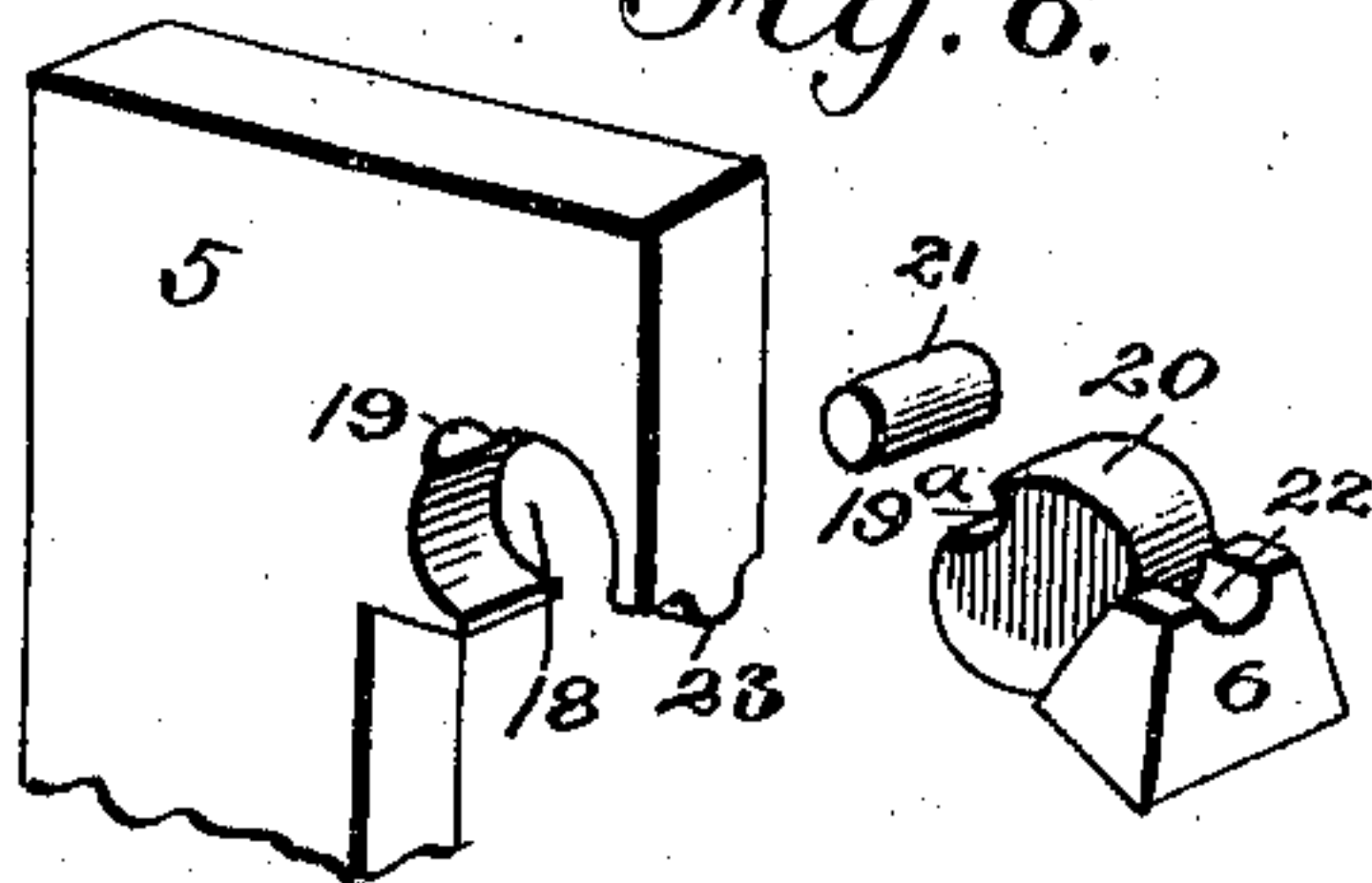


Fig. 6.

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JAMES R. RAMBO, OF PULASKI, TENNESSEE.

BOLT-CUTTER.

SPECIFICATION forming part of Letters Patent No. 598,439, dated February 1, 1898.

Application filed October 29, 1897. Serial No. 656,790. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. RAMBO, of Pulaski, in the county of Giles and State of Tennessee, have invented a new and useful Improvement in Bolt-Cutters, of which the following is a specification.

My invention is an improvement in the class of hand bolt-cutters whose jaws and cutters proper are adapted to move toward and from each other in straight and parallel lines.

My device is capable of use for bolt-cutting in general; but it is particularly adapted and intended for use in cutting off the ends of tire-bolts, which it does squarely and evenly, leaving no bur, as is done by machines ordinarily employed for the purpose.

The construction, arrangement, and operation of parts are as hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 is a side view of my bolt-cutter. Fig. 2 is an enlarged vertical section of the head of the same. Fig. 3 is a cross-section on line 3 3 of Fig. 2. Figs. 4 and 5 are detail side and top views of the head of the jaw-lever. Fig. 6 is a perspective view of a portion of the movable jaw and its cutter detached.

The hollow narrow right-angular head of my bolt-cutter is formed, mainly, of two parallel side plates 1, which are riveted to an interposed block 2, and the enlarged head 3 of a handle 4. The L-shaped jaw 5, carrying the cutter 6, and the jaw 5', which has no cutter, are arranged parallel in such head and slide lengthwise in frictional contact, but in opposite directions. The means for moving the jaws 5 5' is a compound lever, composed of the handle-lever 7 and the supplemental or jaw lever 8. The handle-lever 7 is pivoted to the head 1 of the bolt-cutter at a point adjacent to that where the rigid handle 4 is attached and extends alongside the latter, so that both may be conveniently grasped and held in the hand. The jaw-lever 8 is pivoted at its outer extremity to such handle-lever 7 at a point about midway of the length of the latter, where a slot 9 is provided for the pivot-bolt 10, so that the latter may slide when the bolt-cutter is being operated. The jaw-lever 8 has a circular head 11, Figs. 4 and 5, which fits loosely in a corresponding opening 12 in the head 1. From such lever-head 11 pro-

ject at a right angle to the lever proper, 8, two cylindrical prongs 13, that enter semicircular notches 14, Fig. 2, formed in the inner adjacent sides of the respective jaws 5 5'. Between said prongs 13 and projecting beyond their outer ends is a pivot-screw 15, which passes through a side 1 of the head in opposition to that in which the circular lever-head 11 has its bearing. Thus the jaw-lever 8 has a pivot or journal bearing in both sides 1 of the bolt-cutter head.

It will now be apparent that by opening the handle-lever 7—i. e., separating it from the fixed handle 4—the jaws 5 5' will be opened correspondingly, and upon closing the handle-lever 7 the jaws 5 5' will also close—that is to say, the cutter 6 will approximate the flat head of the shorter jaw 5', as required, to sever an interposed bolt end, which operation it performs with comparative ease owing to the compound leverage employed. In both opening and closing the jaws 5 5' reciprocate or slide in right parallel lines in opposite directions, and by their operation on the bolt end sever it smoothly.

The jaws are held in duly close contact by means of an adjustable wear-piece 16, Fig. 2, which is arranged between the L-jaw 5 and the block 2 of the head. The same is provided with end flanges, which prevent longitudinal movement, and its adjustment laterally is effected by screw-bolts 17, that work through the aforesaid block 2.

The form of the cutter proper, 6, is not new; but it is attached and held in place in the jaw 5 by means of a novel construction. Said jaw 5 has a cylindrical groove 18 extending entirely across its face, and in the bottom of such groove 18 is formed a small semicircular groove 19. The cylindrical rib 20 of the cutter 6 fits, but is adapted to slide lengthwise, in the jaw-groove 18 and is provided with a small semicircular groove 19^a, that matches the small groove 19 in the jaw 5, thus forming a cylindrical hole for securing a pin or rivet 21, whose function is to prevent rotation of the cutter 6 on its axis. In order to prevent lateral sliding movement of the cutter, its head has a notch 22 to receive a corresponding lug 23 on the jaw 5. (See Fig. 6.) By these means the cutter 6 is held rigidly in place, as required for use; yet it may be readily de-

tached, when dull or broken, by simply driving out the pin 21.

What I claim is—

- 5 1. The improved bolt-cutter, comprising a hollow head having a rigid handle, the two parallel jaws arranged slidably in said head, a handle-lever pivoted to the head, and a jaw-lever whose head is provided with projections engaging the respective jaws, and whose outer
10 end has a pivotal and loose connection with the handle-lever, as shown and described.
2. In a bolt-cutter, the hollow head, the slidable jaws arranged parallel and having
15 L shape, a lever for operating said jaws, having a circular head that is journaled in the side plates of the bolt-cutter head, and provided with cylindrical, parallel prongs adapt-

ed to work in the jaw-notches, as shown and described, whereby, when the lever is oscillated, the jaws are slid in opposite directions as required. 20

3. In a bolt-cutter, the combination with the jaw having a cylindrical groove, of the cutter having a corresponding cylindrical rib, 25 coinciding semicircular grooves in the jaw and cutter, a pin fitting in the hole formed by such grooves, and the cutter and jaw having an engaging notch and lug, as shown and described, whereby rotary and lateral movement of the cutter are prevented and its detachment provided for, as specified. 30

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Witnesses:

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